IEPA Log No.: **C-0039-17**
CoE appl. #: **LRL-2016-1202**

Public Notice Beginning Date: **April 3, 2017**
Public Notice Ending Date: **April 18, 2017**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Illinois Department of Transportation – 400 West Wabash Avenue, Effingham, IL 62401

Discharge Location: Near Effingham in Sections 4, 5, 8 and 9 of Township 6N, Range 6E of the 3rd P.M. in Effingham County.

Name of Receiving Water: West Salt Creek

Project Description: Proposed realignment and shoulder widening along a 0.89 mile segment of US-45.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please call Darren Gove at 217/782-3362.

DRG:C-0039-17_401 PN and FS_06Feb17.docx

Fact Sheet for Antidegradation Assessment
For Illinois Department of Transportation
IEPA Log No. C-0039-17
COE Log No. LRL-2016-1202
Contact: Brian Koch 217/558-2012
Public Notice Start Date: April 3, 2017

Illinois Department of Transportation ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with the roadway improvements to approximately 0.89 miles of U.S. 45 in Sections 4, 5, 8 and 9, Township 6 North, Range 6 East, Effingham County, Illinois. The road project site is located approximately 8 miles south of Effingham beginning approximately 2 miles south of IL 37 and ending approximately 1400 feet south of 500th Avenue. The proposed road project would replace an existing stretch of roadway currently featuring 24 foot wide pavement, 3 foot wide aggregate shoulders and 1:2 side slopes with a new roadway having 8 foot wide shoulders and flatter side slopes. The horizontal alignment of the new road would be located up to 8 feet to the west of the existing road's alignment and the vertical grade of the new roadway would be increased throughout its length to obtain a more gradual profile. The new roadway would include stone riprap slope stabilization along approximately 80 feet of its length on the east side where the West Branch Salt Creek has begun to erode into the road embankment. Approximately 64 cubic yards of armor stone (approximately 15"-22" in size) would be placed below the OHWM of West Branch Salt Creek. The road improvements would also permanently fill 0.446 acres of a forested wetland (Site 1), 1.051 acres of wet meadows from two wetlands (Sites 2 and 4), and 0.024 acres of a wet shrubland wetland (Site 3). The proposed project is required in order to raise the road profile to prevent floodwater overtopping and improve the sight distance at an intersection, widen the shoulders to 8 feet and flatten the side slopes to create a recovery zone for lane departure crashes and stabilize the streambank of the West Branch Salt Creek to prevent further erosion toward the highway.

Information used in this review was obtained from the "Application for Individual Water Quality Certification/401 permit for the US-45 Safety Project" and attached documentation that was received February 6, 2017 and the Antidegradation Assessment Report received March 3, 2017.

Identification and Characterization of the Affected Water Body.

The unnamed wetlands to be permanently impacted by the proposed project are General Use waters that contain 0 cfs of flow during 7Q10 low-flow conditions. The wetlands have not been assessed under the Agency's 305(b)/303(d) program and have not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication *Integrating Multiple Taxa in a Biological Stream Rating System*. The wetlands are not enhanced in regards to the dissolved oxygen water quality standard.

West Branch Salt Creek (No segment ID code) is a General Use water body that contains 0 cfs of flow during 7Q10 low-flow conditions. Given its small watershed size (10.5 square miles), the stream has not been assessed under the Agency's 305(b)/303(d) program. West Branch Salt Creek has not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it listed as an enhanced stream in regards to the dissolved oxygen water quality standard.

Given that the stream has not been assessed by the Agency, the Applicant requested the Illinois Natural History Survey to conduct a physical, chemical, and biological assessment of West Branch Salt Creek near the proposed construction area. Survey methods followed Illinois Environmental Protection Agency ("Agency") protocols. Substrates observed in West Branch Salt Creek consisted primarily of sand (75-80%) and gravel (10-15%), with abundant woody debris. Based on the Agency's Stream Habitat Assessment Procedure the West Branch Salt Creek possessed a score of 46.6, which is found at the upper range of "Poor" values. The limiting factor for the stream was the quality/stability of benthic substrates. Water chemistry data determined that the stream was attaining water quality standards with the exception of dissolved iron. Biological sampling consisted of fish and macroinvertebrate surveys. A total of 72 fish representing 11 species were collected by pull-seining and kick-seining throughout a 100-yard stretch of the stream at the proposed location for riprap placement. The collected taxa primarily consisted of cyprinids, darters, suckers, and sunfish, which is consistent with that expected for this region and stream size. The orange-throat darter, which is considered an intolerant species, was the most frequently encountered species. No state or federally threatened/endangered species were collected or observed during the survey. A total of 204 macroinvertebrates representing 17 species were collected using the Agency's 20-jab allocation method. The macroinvertebrate assemblage was comprised of a small proportion of tolerant taxa and was dominated by net-spinning caddisflies (Family Hydropsychidae). The mIBI composite metric for this site scored a 31.1, which is considered "Fair" using the Agency's index scores.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur from this project include some possible increases in total suspended solids. These increases, a normal and unavoidable result of streambank stabilization during roadway construction activities, may occur in the stream and the wetlands that are adjacent to the proposed roadway alignment. The applicant proposes to conduct the work during periods of low flow and would utilize soil erosion and sediment controls during construction to minimize impacts to water quality. Additionally, the project would shift the roadway centerline further from the stream and create flatter side slopes, which would tend to benefit infiltration of roadway runoff. Pollutants typically found in roadway runoff are not anticipated to be increased as the project is not adding additional traffic lanes or causing a shift in vehicular traffic through this route. The project would permanently impact 1.521 acres of wetlands that are along the west side of the roadway, but the loss of aquatic habitat would be mitigated with the purchase of wetland mitigation bank credits at Lawrence Wetland Mitigation Bank. Wetland impacts to Sites 1-3 would be mitigated at a 2:1 ratio, whereas wetland impacts to Site 4 would be mitigated at a 5.5:1 ratio due to size of this wetland (>0.5 acres).

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids would be local and temporary. Both temporary and permanent erosion control measures would be implemented to maintain a high quality of storm water runoff from the disturbed areas. The loss of wetland habitat would be offset by the purchase of wetland mitigation bank credits.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the proposed road realignment is to provide improved safety and mobility for users of this roadway. According to the applicant, current conditions include overtopping of the roadway during heavy rains, insufficient sight distance where the highway crosses 500th Avenue, and narrow shoulders with steep slopes and erosion of the road embankment at one location caused by the stream. The proposed roadway improvements would address each of these conditions and would reduce the potential for vehicular accidents. Between the years of 2005 and 2012 there were three serious vehicle accidents along this stretch of road which included fatalities in two of them. The proposed improvements would raise the road profile to prevent floodwater overtopping and improve the sight distance at the intersection, widen the shoulders to 8 feet and flatten the side slopes to create a recovery zone for lane departure crashes, and stabilize the streambank of the West Branch Salt Creek to prevent further erosion toward the highway. Additionally, this project would create temporary construction jobs for approximately two construction seasons.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

According to the Applicant the current roadway design standard calls for 8 foot shoulders and side slopes at 1:4 on both sides of the highway. The project built to standard would require greater impacts to the wetlands on the west side of the highway and/or the West Salt Creek. Three options were considered to further minimize impacts to aquatic habitat at the project site.

Option 1:
Do nothing:

- Leaves currently eroding road embankment susceptible to continued erosion.
- Narrow shoulders and steep sideslope would remain and provide no chance of vehicle recovery following road departure.
- Limited vertical sight distance limits drivers awareness of oncoming traffic and limited horizontal visibility at intersection would remain.
- Flooding of the roadway would continue and not be reduced.

Option 2:
Place vertical metal sheet piling along the edge of stream embankment:

- Would create an eight foot drop off at the stream's edge that would pose an unacceptable risk to traveling public and road maintenance workers such as mowing crews.
- High likelihood of corrosion and failure, cost prohibitive and difficult to maintain.

Option 3 (Preferred Option):
Upgrade the section of highway while minimizing the impacts:

- Utilize standard 1:4 slopes where possible.
- Utilize 1:3 slopes where aquatic habitat impacts can be avoided or minimized.

The construction of the roadway improvements would follow guidelines set forth by the Agency and the Corps of Engineers. The least intrusive alternative would be to not construct the project. This is not an acceptable alternative given the need to improve safety and mobility for the traveling public by reducing the potential for road flooding and providing full size shoulders for breakdown and accident recovery. Two design options other than the proposed option were considered to minimize the size and impact of the project. It was determined that the two alternatives would not adequately address the need for road improvements.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

The Natural Resources Review Memorandum, dated October 7, 2016 indicated that the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. No species listed as threatened or endangered federally or in Illinois were found during the wetland survey within the project corridor. Also, no natural communities of special interest were noted.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft 401 Water Quality Certification was written. We tentatively find that the proposed activity would result in the attainment of water quality standards; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that the proposed project would benefit the community at large by improving the safety and mobility of the roadway. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.